

---

---

वाहक सुरक्षा हेतु अनुशंसित रीति संहिता  
भाग 4 दोलायमान वाहक/फीडर  
(दूसरा पुनरीक्षण)

Code of Recommended Practice for  
Conveyor Safety  
Part 4 Vibrating Conveyor/Feeder  
( Second Revision )

ICS 53.040.10

© BIS 2023



भारतीय मानक ब्यूरो  
BUREAU OF INDIAN STANDARDS  
मानक भवन, 9 बहादुर शाह ज़फर मार्ग, नई दिल्ली - 110002  
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
NEW DELHI - 110002  
[www.bis.gov.in](http://www.bis.gov.in) [www.standardsbis.in](http://www.standardsbis.in)

June 2023

Price Group 3

## FOREWORD

This Indian Standard (Second Revision) was adopted by the Bureau of Indian Standards on recommendation of the Continuous Bulk Conveying, Elevating, Hoisting Aerial Ropeways and Related Equipment Sectional Committee, had been approved by the Mechanical Engineering Divisional Council.

This Indian Standard (Part 4) first published in 1974 and subsequently revised in 1990. It covers the recommended practice to be adopted in the safe use of conveyors and conveying machinery used for transportation of bulk materials or unit loads.

Vibrating conveyors differ from other types of conveying machines, in as much as the movement of the load/material on the pan is determined by the weights of the vibrating masses, and the characteristics of the exciting forces and the opposing forces of resistance. The load moves over the greater part of the conveyor by micro-leaps. This eventually saves power of transportation with considerable lesser wear on the load carrying members. The conveyors are generally used for granular and loose materials.

This revision has been taken up to keep pace with the latest technological developments. In this revision, the standard has been brought into latest style and format of Indian Standards, and references to Indian Standards, wherever applicable have been updated.

The code of recommended practice for conveyor safety is in eight parts. This standard (Part 4) covers the safety requirements in vibrating conveyor or feeders. Other parts in this series under the general title are as follows:

- Part 1 General information
- Part 2 General safety requirements
- Part 3 Belt conveyors and feeders
- Part 5 Apron conveyors/apron feeders
- Part 6 Selection, training and supervision of operators
- Part 7 Inspection and maintenance
- Part 8 Flight conveyors

The composition of the committee responsible for the formulation of this standard is listed in Annex A.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Indian Standard***CODE OF RECOMMENDED PRACTICE FOR CONVEYOR  
SAFETY****PART 4 VIBRATING CONVEYOR/FEEDER***( Second Revision )***1 SCOPE**

**1.1** This standard (Part 4) covers the specific safety requirements for vibrating conveyor/feeder. These requirements are in addition to the information given in IS 7155 (Part 1) and the general safety requirements given in IS 7155 (Part 2).

**1.2** These safety requirements shall apply to various types (depending on the type of drive used) of vibrating conveyors/feeders such as self balancing inertia type, partially balanced type, eccentric actuation type and electromagnetic actuation type.

**2 REFERENCES**

The standards listed below, contain provisions which, through their reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards listed below:

<i>IS No.</i>	<i>Title</i>
IS 7155	Code of recommended practice for conveyor safety:
(Part 1) : 1986	General information ( <i>first revision</i> )
(Part 2) : 1986	General safety requirements ( <i>first revision</i> )

**3 SPECIFIC SAFETY REQUIREMENTS**

**3.1** Besides statutory and other requirements relating to safety in general, specific safety requirements shall be observed at the following stages:

- During the construction stage (design, and manufacture);
- During the installation stage (design, commissioning and entry into service); and
- During the utilization stage (operation and maintenance).

**3.2 During the Construction Stage (Design and Manufacture)**

**3.2.1** Design of the vibrating conveyor/feeder shall be done keeping in view the various parameters, to obtain the selected capacity, speed of transportation of material under the influence of vibrator and minimum material depth on the pan.

**3.2.2** It shall be ensured that after installation the material fed into the vibrating conveyor/feeder shall be regulated and compatible with the selected/designed capacity of the conveyor/feeder.

**3.2.3** The various parameters during design and construction shall be selected in such a way that vibrating conveyor/feeder shall be suitable to operate above, at or below its resonance point so that distinct advantages are availed off and drawbacks avoided.

**3.2.4** Dynamic loads, in addition to static loads, shall be carefully analyzed and care shall be taken for such loads while deciding/designing the vibration damping arrangement(s) and the foundation of the conveyor/feeder.

**3.3 During the Installation Stage**

**3.3.1** Clearance between the trough and any external stationary structure shall not be less than 75 mm.

**3.3.2** A clear space of not less than 600 mm shall be provided between the moving end of vibrating conveyor/feeder and any fixed structure in cases of installations without walkways.

**3.3.3** The conveyor/feeder shall be installed in such a way that accumulation of materials shall not dampen the normal oscillation of the conveyor/feeder.

**3.3.4** Adequate and suitable guards shall be provided for all moving parts.

**3.4** During utilization stage (operation and maintenance) the material fed into the vibrating conveyor/feeder shall be so regulated (*see 3.2.2*) as not to exceed the capacity requirements of the conveyor/feeder.

**ANNEX A**  
(Foreword)

**COMMITTEE COMPOSITION**

Continuous Bulk Conveying, Elevating, Hoisting Aerial Ropeways and Related Equipment Sectional Committee, MED 06

<i>Organization(s)</i>	<i>Representative(s)</i>
Rites Limited, Gurugram	SHRI D. MAJUMDAR ( <b>Chairperson</b> )
CSIR — Central Institute for Mining and Fuel Research, Dhanbad	SHRI DEBASHISH BASAK SHRI GIRENDRA M. PRASAD ( <i>Alternate</i> )
Conveyor and Ropeway Services Private Limited, Kolkata	SHRI S. SHEKHAR CHKRAVARTY SHRI KAMAL KUMAR BOSE ( <i>Alternate</i> )
Damodar Ropeways & Infra Limited, Kolkata	SHRI D. L. DAS
Directorate General Factory Advice Service and Labour Institutes, Mumbai	SHRI G. P. NIJALINGAPPA SHRI H. M. BHANDARI ( <i>Alternate</i> )
Directorate General of Mines Safety, Dhanbad	SHRI D. B. NAYAK SHRI VIJAY YADAORAO BARAPATRE ( <i>Alternate</i> )
Durgapur Steel Plant, Sail Durgapur	SHRI SANJAY KUMAR SHRI DEEPAK BISWAL ( <i>Alternate</i> )
Indian Association of Amusement Parks and Industries, Mumbai	SHRI PRADEEP SHARMA SHRI ANIL PADWAL ( <i>Alternate</i> )
Lepton Projects Private Limited, Ghaziabad	SHRI SANJAY KUMAR SHRI PIYUSH RATHI ( <i>Alternate</i> )
Mecon Limited, Ranchi	SHRI SANJOY BHATTACHAR SHRI AMIT PAL ( <i>Alternate</i> )
Ministry of Ports, Shipping and Waterways, New Delhi	SHRI ANIL PRUTHI SHRI RAMJI SINGH ( <i>Alternate</i> )
Ntpc Limited, New Delhi	SHRI O. P. KALIA
National Mineral Development Corporation, Hyderabad	SHRI ALOK KUMAR MEHTA SHRI S. SURENDER ( <i>Alternate</i> )
Phoenix Conveyor Belt India Private Limited, Kolkata	SHRI RAJEEV SHARMA SHRI ASOKE KUM GHOSH ( <i>Alternate</i> )
Project and Development India Limited, Noida	SHRI NARENDRA SINGH
Rites Limited, Gurugram	SHRI DINESH KUMAR
Ropeway and Resorts Private Limited, Kolkata	SHRI BIPLAB DAS SHRI SUDIPTA KRISHANA ( <i>Alternate</i> )
Tata Consulting Engineers Limited, Navi Mumbai	SHRI SHIREESH S. SWAMI ( <i>Alternate</i> )
Usha Breco Limited, Ghaziabad	SHRI MANOJ PANWAR SHRI SANJEEV DHARIWAL ( <i>Alternate</i> )
Usha Martin Limited, Ranchi	SHRI SUBRATA DUTTA SHRI SANDEEP JAISWAL ( <i>Alternate</i> )
In Personal Capacity (BH/V1/SF, VIP Floors Sector 81, DPS Faridabad, - 121007)	SHRI ASHUTOSH BHADRA
In Personal Capacity (F-7B DDA MIG Flats, Hari Nagar, New Delhi - 110006)	SHRI S. C. GANDHI

*Organization(s)*

*Representative(s)*

In Personal Capacity (20 D, Dhakuria Station Road, Kolkata  
-700031)

SHRI RANJAN MUKHERJEE

BIS Directorate General

SHRI RAJNEESH KHOSLA, SCIENTIST 'F'/SENIOR  
DIRECTOR AND HEAD (MECHANICAL ENGINEERING)  
[REPRESENTING DIRECTOR GENERAL (*Ex-officio*)]

*Member Secretary*

SHRI AMAN DHANAWAT  
SCIENTIST 'B'/ASSISTANT DIRECTOR  
(MECHANICAL ENGINEERING), BIS





## Bureau of Indian Standards

BIS is a statutory institution established under the *Bureau of Indian Standards Act, 2016* to promote harmonious development of the activities of standardization, marking and quality certification of goods and attending to connected matters in the country.

### Copyright

BIS has the copyright of all its publications. No part of these publications may be reproduced in any form without the prior permission in writing of BIS. This does not preclude the free use, in the course of implementing the standard, of necessary details, such as symbols and sizes, type or grade designations. Enquiries relating to copyright be addressed to the Head (Publication & Sales), BIS.

### Review of Indian Standards

Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the website- [www.bis.gov.in](http://www.bis.gov.in) or [www.standardsbis.in](http://www.standardsbis.in).

This Indian Standard has been developed from Doc No.: MED 06 (20450).

### Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

## BUREAU OF INDIAN STANDARDS

### Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110002

Telephones: 2323 0131, 2323 3375, 2323 9402

Website: [www.bis.gov.in](http://www.bis.gov.in)

### Regional Offices:

	Telephones
Central : 601/A, Konnectus Tower -1, 6 <sup>th</sup> Floor, DMRC Building, Bhavbhuti Marg, New Delhi 110002	{ 2323 7617
Eastern : 8 <sup>th</sup> Floor, Plot No 7/7 & 7/8, CP Block, Sector V, Salt Lake, Kolkata, West Bengal 700091	{ 2367 0012 2320 9474
Northern : Plot No. 4-A, Sector 27-B, Madhya Marg, Chandigarh 160019	{ 265 9930
Southern : C.I.T. Campus, IV Cross Road, Taramani, Chennai 600113	{ 2254 1442 2254 1216
Western : Plot No. E-9, Road No.-8, MIDC, Andheri (East), Mumbai 400093	{ 2821 8093

**Branches :** AHMEDABAD. BENGALURU. BHOPAL. BHUBANESHWAR. CHANDIGARH. CHENNAI. COIMBATORE. DEHRADUN. DELHI. FARIDABAD. GHAZIABAD. GUWAHATI. HIMACHAL PRADESH. HUBLI. HYDERABAD. JAIPUR. JAMMU & KASHMIR. JAMSHEDPUR. KOCHI. KOLKATA. LUCKNOW. MADURAI. MUMBAI. NAGPUR. NOIDA. PANIPAT. PATNA. PUNE. RAIPUR. RAJKOT. SURAT. VISAKHAPATNAM.